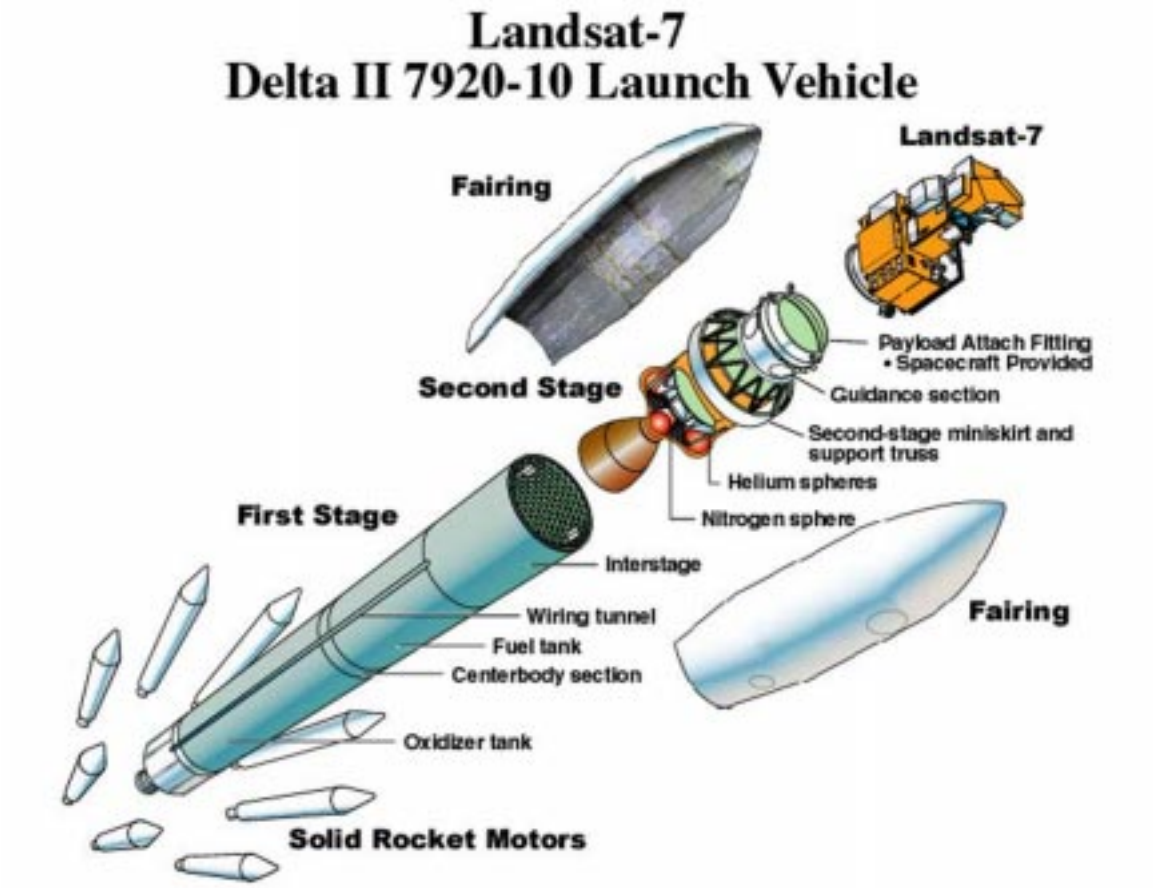
Landsat 7 Boeing Delta II Launch Vehicle



Boeing Delta II to Launch Landsat 7 Spacecraft

Landsat 7 Mission Profile
Researchers will view changing global conditions from 400 miles above the Earth with a NASA spacecraft launched aboard a Boeing [NYSE: BA] Delta II rocket.

A Delta II 7920-10 is poised to lift NASA's Landsat 7 spacecraft from Vandenberg Air Force Base, Calif. on April 15. An hour, one minute and 40 seconds after liftoff, Landsat 7 will separate from the upper stage of the Delta II at an altitude of 377.6 nautical mile to insert itself into orbit.

Landsat 7 is the latest in a series of Earth-imaging spacecraft to continue the 26-year flow of global change information to the scientific community and commercial users worldwide. It is the latest mission in the Landsat series which is part of NASA's Mission to Planet Earth program.

Data from Landsat are used for monitoring global deforestation,

monitoring fire damage, estimating soil moisture and snow water equivalence, monitoring flood, storm, earthquake and volcanic eruption damage. Additional applications include monitoring strip mining reclamation and population changes in and around metropolitan areas.

The satellite weighs approximately 4,400 pounds. Landsat 7 consists of a spacecraft bus, being provided under a NASA contract with Lockheed Martin Missiles and Space in Valley Forge, Penn. The spacecraft's Enhanced Thematic Mapper Plus instrument was procured under a NASA contract with Hughes Santa Barbara Remote Sensing in Santa Barbara, Calif.

Landsat's ground system will offer a 24-hour turn around on raw data and includes a spacecraft control center and data processing facility developed by NASA's Goddard Space Flight Center in Greenbelt, MD. The primary receiving station and data distribution center will be at the U.S. Geological Survey's EROS Data Center in Sioux Falls, S.D.

NASA payloads have been launched into orbit or into deep space aboard Boeing Delta rockets since 1961. Landsat 7 is the seventh NASA-sponsored payload Boeing has launched in the last eight months.

The Delta II is a medium capacity expendable launch vehicle derived from the Delta family of rockets built and launched since 1960. The Delta II rocket is manufactured in Huntington Beach, Calif., with final assembly in Pueblo, Colo., and is powered by the RS-27A engine built by Boeing in Canoga Park, Calif. Launch coordination and operations are provided by Delta launch teams at Cape Canaveral Air Station, Fla. and Vandenberg Air Force Base.

Alliant Techsystems, Magna, Utah, builds the graphite epoxy motors for boost assist. Aerojet, Sacramento, Calif., manufactures the second-stage engine, Cordant Technologies, Elkton, Md., supplies the upper-stage engine, and AlliedSignal, Teterboro, N.J., builds the guidance and flight control system.

Information adapted from:

http://www.boeing.com/defense-space/space/delta/delta2/Landsat/book03.html